National Institute of Environmental Health Sciences

Climate change mitigation by recovery of energy from the water cycle: A new challenge for water management

Author(s): van der Hoek JP
Year: 2011
Journal: Water Science and Technology : A Journal of The International Association on Water Pollution Research. 65 (1): 135-141

Abstract:

Waternet is responsible for drinking water treatment and distribution, wastewater collection and treatment, and surface water management and control (quality and quantity) in and around Amsterdam. Waternet has the ambition to operate climate neutral in 2020. To realise this ambition, measures are required to compensate for the emission of 53,000 ton CO(2)-eq/year. Energy recovery from the water cycle looks very promising. First, calculations reveal that energy recovery from the water cycle in and around Amsterdam may contribute to a total reduction in greenhouse gas emissions up to 148,000 ton CO(2)-eq/year. The challenge for the coming years is to choose combinations of all the possibilities to fulfil the energy demand as much as possible. Only then the use of fossil fuel can be minimized and inevitable greenhouse gas emissions can be compensated, supporting the target to operate climate neutral in 2020.

Source: http://dx.doi.org/10.2166/wst.2011.820

Resource Description

Communication: ☑

resource focus on research or methods on how to communicate or frame issues on climate change; surveys of attitudes, knowledge, beliefs about climate change

A focus of content

Other Communication Audience: Water managers

Exposure : ☑

weather or climate related pathway by which climate change affects health

Unspecified Exposure

Geographic Feature: ☑

resource focuses on specific type of geography

Freshwater

Geographic Location: ☑

resource focuses on specific location

Non-United States

Non-United States: Europe

European Region/Country: European Country

Other European Country : Netherlands

Health Impact: ☑

specification of health effect or disease related to climate change exposure

Health Outcome Unspecified

Intervention: ☑

strategy to prepare for or reduce the impact of climate change on health

A focus of content

Mitigation/Adaptation: ☑

mitigation or adaptation strategy is a focus of resource

Mitigation

Resource Type: ☑

format or standard characteristic of resource

Research Article

Timescale: ☑

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment: ☑

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content